

Raw and Amended Dredged Material Meeting the Residential Cleanup Standard for Maryland

Proposed Beneficial Use/Upland Disposal	Dredged Material Physical Characteristics	Potential Admixtures	Admixture Ratio (by weight)	Geotechnical Requirements	Chemical Testing Required	Chemical Sampling Frequency	Removal and Transport By	Exclusions
Landfill Closure - Cap - Above Barrier	silt and/or sand	Portland Cement	6-12%	<4" particle size; minimum 85% to 90%modified proctor density Permeability >= 1 x 10-4 cm/sec	1, 2 ,3 ,4 & 5	TBD	Truck	
Landfill Closure - Barrier Layer	clay	NA	0%	<2" particle size; minimum 90% to 95% modified proctor density Permeability < 1x10-5 cm/sec	1, 2 ,3 ,4 & 5	TBD	Truck	
	silt and/or sand	Portland Cement	6-12%	<2" particle size; minimum 90% to 95% modified proctor density Permeability < 1x10-5 cm/sec	1, 2 ,3 ,4 & 5	TBD	Truck	
Quarry and/or Mine Reclamation - Maryland	silt and/or sand	Portland Cement, Off-spec Lime or Cement Products	8-33%	<12" particle size; minimum 85% modified proctor density	1, 2 ,3 ,4 & 5	TBD	Truck/Rail	
Quarry and/or Mine Reclamation - Maryland	clay	NA	0%	<12" particle size; minimum 85% modified proctor density	1, 2 ,3 ,4 & 5	TBD	Truck/Rail	
General Fill Material	silt and/or sand	Portland Cement or None	6-12%	<6" particle size; minimum 85% to 95% modified proctor density; compressive strength, CBR dependent upon use	1, 2 ,3 ,4 & 5	TBD	Truck	
Portland Cement Feedstock	silt and or sand	NA	0%	<8" particle size; inorganic content meeting spec for mix	1, 2 ,3 ,4 & 5	TBD	Truck	
Concrete Batch Plant Feedstock	sand	NA	0%	Grain size; chlorides; organic and inorganic content meeting spec for mix	1, 2 ,3 ,4 & 5	TBD	Truck	
Golf Course Contouring Material	silt and/or sand	Portland Cement	6-12%	<4" particle size; minimum 85% modified proctor density	1, 2 ,3 ,4 & 5	TBD	Truck	

MDE Residential Soil Cleanup Standard from "State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater, August 2001, Interim Final Guidance", Table 1

Raw and Amended Dredged Material Meeting the Non Residential Cleanup Standard for Maryland

Proposed Beneficial Use/Upland Disposal	Dredged Material Physical Characteristics	Potential Admixtures	Admixture Ratio (by weight)	Geotechnical Requirements	Chemical Testing Required	Chemical Sampling Frequency	Removal and Transport By	Exclusions
Landfill Daily Cover Material	silt and/or sand	Portland Cement, Off-spec Lime or Cement Products	8-33%	<4" particle size; minimum 85% to 90%modified proctor density Permeability >= 1 x 10-4 cm/sec	1, 2 ,3 ,4 & 5	TBD	Truck	
Brownfield Site - Grading/Capping Material	silt and/or sand	Portland Cement	6-12%	<6" particle size; minimum 85% to 95% modified proctor density; compressive strength, CBR dependent upon use	1, 2 ,3 ,4 & 5	TBD	Truck	
Quarry and/or Mine Reclamation - Maryland	silt and/or sand	Portland Cement, Off-spec Lime or Cement Products	8-33%	<12" particle size; minimum 85% to 95% modified proctor density; compressive strength, CBR dependent upon use	1, 2 ,3 ,4 & 5	TBD	Truck/Rail	
Sparrow's Point Site Fill	silt and/or sand	Portland Cement, Coal Fly Ash, Off-spec lime or cement products.	0-33%	TBD	1, 2 ,3 ,4 & 5	TBD	Truck	
Sparrow's Point Site Fill	clay	NA	0%	TBD	1, 2 ,3 ,4 & 5	TBD	Truck	

MDE Non Residential Soil Cleanup Standard from "State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater, August 2001, Interim Final Guidance", Table 1

Raw and Amended Dredged Material Meeting the EPA Region III Risk Based Criteria
and or New Jersey Department of Environmental Protection Non Residential Direct
Contact Soil Cleanup Criteria

Proposed Beneficial Use/Upland Disposal	Dredged Material Physical Characteristics	Potential Admixtures	Admixture Ratio (by weight)	Geotechnical Requirements	Chemical Testing Required	Chemical Sampling Frequency	Removal and Transport By	Exclusions
Sand and Gravel Quarry Reclamation - Virginia	silt and/or sand	Portland Cement, Coal Fly Ash, Off-spec lime or cement products.	8-33%	<6" to 12" particle size; minimum 85% to 95% modified proctor density; compressive strength, CBR dependent upon site end use	1, 2 ,3 ,4 & 5	TBD	Water	
Quarry and/or Mine Reclamation - Virginia	clay	NA	0%	<6" to 12" particle size; minimum 85% to 95% modified proctor density; compressive strength, CBR dependent upon site end use	1, 2 ,3 ,4 & 5	TBD	Water	

EPA Region III RBC updated April 2007
NJDEP Non-Residential Direct Contact Soil Cleanup Criteria from, "Proposed Cleanup Standards for Contaminated Sites, NJDEP" revised May 12, 1999

Raw and Amended Dredged Material exceeding the Non Residential Cleanup
Standard for Maryland, but not exceeding RCRA Hazardous Characteristics

Proposed Beneficial Use/Upland Disposal	Dredged Material Physical Characteristics	Potential Admixtures	Admixture Ratio (by weight)	Geotechnical Requirements	Chemical Testing Required	Chemical Sampling Frequency	Removal and Transport By	Exclusions
Landfill Closure - Grading Material (Under Impermeable Cap)	silt and/or sand	Portland Cement, Coal Fly Ash, Municipal Incinerator Ash, Off-spec lime or cement products.	0-33%	<6" particle size; minimum 85% to 95% modified proctor density; cushion layer < 2" particle size	6, 7, 8, 9, 10, 11, 12, 13 & 14	TBD	Truck	
Non-hazardous Treatment or Disposal Facility	silt and/or sand	Portland Cement, Coal Ash, Municipal Incinerator Ash or Off-spec Lime or Cement Products	6-18%	Moisture Percentage < 25%	3, 5, 6, 11, 12 & 13	TBD	Truck/Rail	

RCRA Characteristics from 40 CFR Part 261 Subpart C

Raw and Amended Dredged Material exceeding the RCRA Hazardous Characteristics

Proposed Beneficial Use/Upland Disposal	Dredged Material Physical Characteristics	Potential Admixtures	Admixture Ratio (by weight)	Geotechnical Requirements	Chemical Testing Required	Chemical Sampling Frequency	Removal and Transport By	Exclusions
Hazardous Materials Treatment or Disposal Facility*	silt and/or sand	Portland Cement, Coal Fly Ash, Municipal Incinerator Ash, Off-spec lime or cement products.	0-12%	Moisture Percentage < 25%	6, 7, 8, 9, 10, 11, 12, 13 & 14	TBD	Truck/Rail	

RCRA Characteristics from 40 CFR Part 261 Subpart C

* Hazardous Waste TSDF include:

Veolia Environmental Services 105 Willow Springs Circle York, PA	Waste Management 4622 Wedgewood Boulevard Frederick, MD 21704	Clean Earth of North Jersey 115 Jacobus Avenue South Kearny, NJ 07032
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- 1 = Volatile Organic Compounds by EPA Method SW846-8260B
- 2 = Semivolatile Organic Compounds by EPA Method SW846-8270C
- 3 = Pesticides/PCBs by EPA Method SW846-808A/8082
- 4 = TAL Metals by EPA Method SW846-6010B/7471A
- 5 = Total Petroleum Hydrocarbons by EPA Method SW846-8015M
- 6 = TCLP Metals by EPA Method SW1311/6010/7000
- 7 = TCLP Volatiles by EPA Method SW1311/8260
- 8 = TCLP Semivolatiles by EPA Method SW1311/8270
- 9 = TCLP Pesticides by EPA Method SW1311/8081
- 10 = TCLP Herbicides by EPA Method SW1311/8150
- 11 = Ignitability by EPA Method SWA846-1030
- 12 = Corrosivity by EPA Method SW846-9040
- 13 = BTEX by EPA Method SW846-8260B
- 14 = Reactvity by EPA Method SW846-7.3.3.2/7.3.4.2